

(Published in the Topeka Metro News April 30, 2012)

ORDINANCE NO. 19727

AN ORDINANCE introduced by Daniel R. Stanley, Interim City Manager amending City of Topeka Code § 14.55.010 and § 14.55.060 through § 14.55.270, concerning the adoption of and the amendments to the 2009 International Residential Code and specifically repealing said original sections as well as creating new § 14.55.280 through § 14.55.640.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF TOPEKA:

Section 1. That section 14.55.010, International Residential Code, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

International Residential Code.

International Residential Code for One- and Two-Family Dwellings, 2009 Edition, hereinafter referred to as the "IRC," as published by the International Code Council, Chapters 1 through 10 and Appendix F, are hereby adopted by reference and incorporated in this chapter ~~as if fully set forth in this section~~ except as amended in Article II.

Section 2. That section 14.55.050, Permit required, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~Permit required~~Title.

~~Section R-105.1, Required,~~ is hereby amended to read as follows:

~~1. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any~~

29 ~~such work to be done, shall first make application to the building official and obtain the~~
30 ~~required permit.~~

31 ~~2. Notwithstanding any other provision of this code, for the period commencing upon the~~
32 ~~effective date of this Ordinance until December 31, 2006, a building permit to construct,~~
33 ~~enlarge, alter, repair, move, demolish or change the occupancy of any residential~~
34 ~~property originally constructed before 1978 may be issued if the building official has~~
35 ~~been provided a document signed by the contractor certifying that he or she has~~
36 ~~provided the occupant of the property where the work is to be performed with a copy of~~
37 ~~the United States Environmental Protection Agency (EPA) pamphlet titled, "Protect Your~~
38 ~~Family From Lead In Your Home."~~

39 ~~3. Beginning January 1, 2007, a mechanical, plumbing or electrical trade contractor~~
40 ~~license or a commercial or residential contractor license may be issued if the building~~
41 ~~official has been provided a document signed by the contractor certifying that he or she~~
42 ~~will provide the occupant of any residential property originally constructed before 1978~~
43 ~~where the work is to be performed, with a copy of the United States Environmental~~
44 ~~Protection Agency (EPA) pamphlet titled, "Protect Your Family From Lead In Your~~
45 ~~Home."~~

46 Section R101.1, Title, is hereby deleted in its entirety and the following provisions
47 shall be substituted therefor:

48 These provisions shall be known as the Residential Code for One- and Two-
49 family Dwellings of the City of Topeka, and shall be cited as such and will be referred to
50 herein as "this code."

51 Section 3. That section 14.55.060, Work exempt from permit, of The Code of
52 the City of Topeka, Kansas, is hereby amended to read as follows:

53 ~~Work exempt from permit~~Referenced codes and standards.

54 ~~Section R-105.2, Work exempt from permit, is hereby amended to read as follows:~~

55 ~~Permits shall not be required for the following. Exemption from the permit requirements~~
56 ~~of this code shall not be deemed to grant authorization for any work to be done in any~~
57 ~~manner in violation of the provisions of this code or any other laws or ordinances of this~~
58 ~~jurisdiction.~~

59 ~~Building:~~

60 ~~1. One (1) story detached accessory structures, provided the floor area does not exceed~~
61 ~~one hundred fifty (150) square feet.~~

62 ~~2. Retaining walls that are not over four (4) feet (1,219 mm) in height measured from the~~
63 ~~bottom of the footing to the top of the wall, unless supporting a surcharge.~~

64 ~~3. Water tanks supported directly upon grade if the capacity does not exceed five~~
65 ~~thousand (5,000) gallons (18,927 L) and the ratio of height to diameter or width does not~~
66 ~~exceed two (2) to one (1).~~

67 ~~4. Sidewalks and driveways not more than thirty (30) inches (762 mm) above adjacent~~
68 ~~grade and not over any basement or story below.~~

69 ~~5. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.~~

70 ~~6. Prefabricated swimming pools that are less than twenty four (24) inches (610 mm)~~
71 ~~deep.~~

72 ~~7. Swings and other playground equipment accessory to a one (1) or two (2) family~~
73 ~~dwelling.~~

74 ~~8. Window awnings supported by an exterior wall which do not project more than fifty-~~
75 ~~four (54) inches (1,372 mm) from the exterior wall and do not require additional support.~~

76 ~~9. Any deck less than one hundred fifty (150) square feet in area which is not more than~~
77 ~~thirty (30) inches above grade and projects ten (10) feet or less from the structure.~~

78 ~~10. Ordinary repairs that are nonstructural and do not include the addition to or~~
79 ~~alteration of the existing construction. This only applies to building construction, and~~
80 ~~work done to the plumbing, mechanical, or electrical areas is covered by their~~
81 ~~appropriate codes.~~

82 Section R102.4 Referenced codes and standards, is hereby deleted in its entirety
83 and the following provisions shall be substituted therefor:

84 The codes and standards referenced in this code shall be considered part of the
85 requirements of this code to the prescribed extent of each such reference. Where
86 differences occur between provisions of this code and referenced codes and standards,
87 the provisions of this code shall apply. The standards referenced in Chapter 44, Part IX
88 – Referenced Standards may be considered and applied by the building official to the
89 extent necessary in the building official's sole discretion to implement and enforce this
90 code.

91 Section 4. That section 14.55.070, Schedule of permit fees, of The Code of
92 the City of Topeka, Kansas, is hereby amended to read as follows:

93 **Schedule of permit feesGeneral.**

94 ~~Section R-108.2, Schedule of permit fees, is hereby amended to read as follows:~~

95 A. On buildings, structures, electrical, gas, mechanical, and plumbing systems or
96 alterations requiring a permit, a fee for each permit shall be paid as required, in
97 accordance with the following schedule:

98 New construction (this includes all permit fees):

Type construction	Fee
Single-family and duplex	
0 — 1,500	\$480.00
1,501 — 3,000	\$660.00
3,001 and over	\$830.00

99 Room additions (this includes all fees):

Area (sq. ft.)	Fee
0 — 100	\$40.00
101 — 250	\$75.00
251 — 500	\$125.00
501 — 750	\$200.00
751 — 1,000	\$275.00
1,001 or more	\$325.00

100 Garage additions (this includes all fees):

Type	Fee
Single	\$50.00
Double	\$75.00
Triple	\$75.00

101 Accessory structure: Only building fee: \$30.00.

102 Interior alteration (building fee only):

Cost	Fee
\$0.00 — \$500.00	\$30.00
\$501.00 — \$5,000.00	\$45.00
\$5,001.00 — \$10,000.00	\$60.00
\$10,001.00 and over	\$100.00

~~B. Working without permit. Whenever work that requires a permit has commenced without a permit, an additional investigation fee equal to the permit fee shall be collected.~~

Section R104.1 General is hereby deleted in its entirety and the following provisions shall be substituted therefor:

R104.1 General. The building official is hereby authorized and directed to enforce the provisions of this code. The building official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in conformance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code. However, a guarantee that all buildings and structures have been constructed in accordance with all of the provisions of this code is neither intended or implied.

Section 5. That section 14.55.080, Violation, penalties, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Violation, penalties~~Lot lines and setback lines.~~

~~Section 113.4, Violation, penalties, is hereby amended to read as follows:~~

~~Any person violating any of the provisions of this code shall be guilty of a misdemeanor and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued or permitted, and upon conviction of any such violation such person shall be punishable by a fine or imprisonment, or by both such fine and imprisonment, as established by local applicable laws.~~

Any individual or contractor who has received a written violation notice and who has not appealed or corrected such violation within ten (10) days shall be deemed ineligible to receive any new or additional building permits until such time as the violation is corrected.

Section R104.12 Lot lines and setback lines is hereby created by the addition of the following provisions:

Notwithstanding the authority of the building official to administer and enforce the building code, the building official shall have no duty to verify or establish lot lines or setback lines. No such duty is created by this code and none shall be implied.

Section 6. That section 14.55.090, Climatic and geographic design criteria, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Climatic and geographic design criteria Permit required.

Table No. R301.2(1), Climatic and geographic design criteria, is hereby amended to read as follows:

Table No. R-301.2(1)
Climatic and Geographic Design Criteria

GROUND SNOW LOAD	WIND SPEED ^e (mph)	SEISMIC DESIGN CATE- GORY ^g	Subject to Damage From				WINTER DESIGN TEMP ^f	ICE SHIELD UNDER- LAYMENT RE- QUIRED ⁱ	FLOOD HAZ- ARDS ^h	AIR FREEZ- ING INDEX ^j	MEAN ANNUAL TEMP ^k
			Weather- ing ^a	Frost line depth ^b	Termite ^e	Decay ^d					
20	90	N/A	Severe	36	Moderate to Heavy	Slight to Moderate	N/A	N/A	N/A	N/A	N/A

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The

grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.

b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

c. The jurisdiction shall fill in this part of the table with “very heavy,” “moderate to heavy,” “slight to moderate,” or “none to slight” in accordance with Figure R301.2(6) depending on whether there has been a history of local damage.

d. The jurisdiction shall fill in this part of the table with “moderate to severe,” “slight to moderate,” or “none to slight” in accordance with Figure R301.2(7) depending on whether there has been a history of local damage.

e. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.

f. The outdoor design dry bulb temperature shall be selected from the columns of 97-1/2 percent values for winter from Appendix D of the International Plumbing Code. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.

g. The jurisdiction shall fill in this part of the table with the Seismic Design Category determined from Section R301.2.2.1.

h. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction’s entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the currently

~~effective FIRM and FBFM, or other flood hazard map adopted by the community, as may be amended.~~

~~i. In accordance with Sections R905.2.7.1, R905.4.3, R905.5.3, R905.6.3, R905.7.3 and R905.8.3, for areas where the average daily temperature in January is 25°F (-4°C) or less, or where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."~~

~~j. The jurisdiction shall fill in this part of the table with the one hundred (100) year return period air freezing index (BF-days) from Figure R403.3(2) or from the one hundred (100) year (99%) value on the National Climatic Data Center data table "Air Freezing Index—USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.~~

~~k. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index—USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.~~

Section R-105.1, Required, is hereby amended to read as follows:

1. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

2. Notwithstanding any other provision of this code a building permit to construct, enlarge, alter, repair, move, demolish or change the occupancy of any

residential property originally constructed before 1978 may be issued if the building official has been provided a document signed by the contractor certifying that he or she has provided the occupant of the property where the work is to be performed with a copy of the United States Environmental Protection Agency (EPA) pamphlet titled, "Protect Your Family From Lead In Your Home."

3. A mechanical, plumbing or electrical trade contractor license or a commercial or residential contractor license may be issued if the building official has been provided a document signed by the contractor certifying that he or she will provide the occupant of any residential property originally constructed before 1978 where the work is to be performed, with a copy of the United States Environmental Protection Agency (EPA) pamphlet titled, "Protect Your Family From Lead In Your Home."

Section 7. That section 14.55.100, Light, ventilation and heating, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Light, ventilation and heatingWork exempt from permit.

~~Section R-303, Light, ventilation and heating, is hereby repealed.~~

Except for Sections R105.2.1, R105.2.2 and R105.2.3, Section R105.2 Work exempt from permit is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Permits shall not be required for the following. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 150 square feet.
2. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.
3. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18 927 L) and the ratio of height to diameter or width does not exceed 2 to 1.
4. Sidewalks and driveways not more than 30 inches above adjacent grade and not over any basement or story below.
5. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
6. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.
7. Swings and other playground equipment accessory to a one or two family dwelling.
8. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
9. Decks not exceeding 150 square feet in area, that are not more than 30 inches (762 mm) above grade at any point, and project ten feet or less from the structure.
10. Ordinary repairs that are nonstructural and do not include the addition to or alteration of the existing construction. This only applies to building construction; work done to the plumbing, mechanical, or electrical areas are covered by their appropriate codes.

Section 8. That section 14.55.110, Room sizes, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Room sizesExpiration.

Section R-304.1, Room sizes, is hereby amended to read as follows:

~~Every dwelling unit shall have at least one (1) habitable room which shall have not less than one hundred fifty square feet (150 ft.²) of floor area, excluding a bedroom.~~

Section R105.5 Expiration is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended, or abandoned or if no inspections have been performed for a period of 180 days after the time the work is commenced. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

Any work authorized by a permit regulated by this code, or previous editions of this code, and administered by the building official which involves the construction or alteration of an exterior building component, assembly or finish material shall be fully finished and completed for permanent outdoor exposure within 24 months of the date of issuance of such permit. Areas involved may include, but are not limited to, foundations, wall and roof framing, sheathing, siding, fenestration, and roof coverings. Failure to comply with the preceding specified time period shall constitute a violation of this code, and the building official is authorized to serve a notice of violation on the permit holder and property owner. If the notice of violation is not complied with in the time prescribed by such notice, the building official is authorized to revoke the building permit and

request the legal counsel of the jurisdiction to institute the appropriate proceeding at law to correct or abate such violation.

Section 9. That section 14.55.120, Other rooms, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Other roomsPremises identification.

~~Section R-304.2, Other rooms, is hereby amended to read as follows:~~

~~Other habitable rooms shall have an area of not less than seventy square feet (70 ft.²), except bedrooms must have a minimum area of ninety square feet (90 ft.²). Multi-bedroom dwelling units shall contain at least one (1) bedroom with one hundred twenty square feet (120 ft.²) of floor area. Every kitchen shall have not less than fifty square feet (50 ft.²) of floor area. Square foot measurement shall be made from inside wall to inside wall.~~

Section R105.10 Premises identification is hereby created by the addition of the following provisions:

The approved permit number and street address number shall be displayed and be plainly visible and legible from the public street or road fronting the property on which any new building is being constructed.

Section 10. That section 14.55.130, Footings, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

FootingsSubmittal documents.

~~Section R-403, Footings, is hereby amended to read as follows:~~

~~All exterior footings, bearing walls, columns and piers shall be supported on continuous concrete footings with two (2) number four (#4) reinforcing bars placed within the bottom~~

~~third (3rd) of the footing but not closer than one and one-half inches (1-1/2 in.) to soil, and in all cases extend below the frost line. Lapping of bars shall be a minimum of 40 bar diameters.~~

~~The top surface of footings shall be level. The bottom surface of footings may have a slope not exceeding one (1) in ten (10). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the slope of the bottom surface of the footing will exceed one (1) in ten (10).~~

~~The following criteria shall be used to determine footing requirements:~~

	Supporting One Floor (inches)*	Supporting Two Floors (inches)*	Supporting Three Floors (inches)*
Footing thickness	6	6	6
Footing width	12	15	18

~~Footings which support walls having a four inch (4 in.) brick veneer shall be required to be increased by an additional four inches (4 in.) of thickness. Footings which support walls composed of solid concrete or grouted masonry eight inches (8 in.) or thicker, shall require an increase of eight inches (8 in.) to the width of the footing.~~

Except for Sections R106.1.1, R106.1.2 and R106.1.3, Section R106.1 Submittal documents is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Submittal documents consisting of construction documents, and other data shall be submitted in two or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special

conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional. Special conditions include, but are not limited to, the following:

1. Cantilever spans of engineered joists in floor, ceiling and roof applications.
2. Load bearing or shear wall offset from floor to floor when exceeding the offset allowed by code. This applies to both solid sawn lumber and engineered joist systems.
3. Floor, roof or wall systems that combine or mix solid sawn dimensional lumber with engineered components such as prefabricated wood I-joists or glued laminated beams.
4. Any complex structure based on any of the following factors:
 - a. large size
 - b. excessive loading on any wall , floor, or roof system caused by materials such as stone, concrete, tile, etc. or fixtures such as hot tubs and whirlpool baths.
 - c. engineered floor or roof systems.
 - d. complexity of roof system.

Exception: The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this code.

Section 11. That section 14.55.140, Concrete and masonry foundation walls, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~Concrete and masonry foundation walls~~ **Manufacturer's installation instructions and specifications.**

Section R-404.1, Concrete and masonry foundation walls, is hereby repealed.

Section R106.1.2 Manufacturer's installation instructions is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Manufacturer's installation instructions and specifications, as required by this code, shall be available on the job site at the time of the applicable inspection. This list shall include, but is not limited to, specification and installation sheets for:

1. Truss roof systems – specifications must include truss member sizing and all required permanent bracing locations for the system.

2. Engineered floor systems (each floor).

Section 12. That section 14.55.150, Masonry foundation walls, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~Masonry foundation walls~~ **Schedule of permit fees.**

Section R-404.1.1, Masonry foundation walls, is hereby repealed.

Section R108.2 Schedule of permit fees is hereby deleted in its entirety and the following provisions shall be substituted therefor:

On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the following schedule:

New construction (this includes all permit fees):

<u>Type construction</u>	<u>Fee</u>
<u>Single-family and duplex</u>	
<u>0 – 1,500</u>	<u>\$480.00</u>
<u>1,501 – 3,000</u>	<u>\$660.00</u>
<u>3,001 and over</u>	<u>\$830.00</u>

347 Room additions (this includes all fees):

<u>Area (sq. ft.)</u>	<u>Fee</u>
<u>0 – 100</u>	<u>\$40.00</u>
<u>101 – 250</u>	<u>\$75.00</u>
<u>251 – 500</u>	<u>\$125.00</u>
<u>501 – 750</u>	<u>\$200.00</u>
<u>751 – 1,000</u>	<u>\$275.00</u>
<u>1,001 or more</u>	<u>\$325.00</u>

348 Garage additions (this includes all fees):

<u>Type</u>	<u>Fee</u>
<u>Single</u>	<u>\$50.00</u>
<u>Double</u>	<u>\$75.00</u>
<u>Triple</u>	<u>\$75.00</u>

349 Accessory structure: Only building fee: \$30.00.

350 Interior alteration (building fee only):

<u>Cost</u>	<u>Fee</u>
<u>\$0.00 – \$500.00</u>	<u>\$30.00</u>
<u>\$501.00 – \$5,000.00</u>	<u>\$45.00</u>
<u>\$5,001.00 – \$10,000.00</u>	<u>\$60.00</u>
<u>\$10,001.00 and over</u>	<u>\$100.00</u>

351

Working without permit. Whenever work that requires a permit has commenced without a permit, an amount equal to twice the normal permit fee shall be paid before the permit is issued.

Investigation fee. All site investigations made by inspectors of work going on without permits will require an additional \$ 50.00 investigation fee, in addition to any other fees, be added to the final permit fee if it is determined that the work being done at the site does indeed require a permit and no application has been made.

Section 13. That section 14.55.160, Concrete foundation walls, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Concrete foundation walls~~Building permit valuations.~~

~~Section R-404.1.2, Concrete foundation walls, is hereby repealed.~~

Section R108.3 Building permit valuations is hereby deleted in its entirety and the following provisions shall be substituted therefor:

The permit applicant shall provide an estimated permit value at time of application. Building permit valuation shall include total value of the work for which a permit is being issued, such as electrical, gas, mechanical, plumbing equipment and other permanent systems, including materials and labor. If the building official decides that the permit valuation is underestimated, the permit application shall be denied, unless the applicant can show detailed estimates to meet the approval of the building official. Final building permit valuation shall be set by the building official.

Section 14. That section 14.55.170, Design required, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Design required~~Types of inspections.~~

375 ~~Section R-404.1.3, Design required, is hereby repealed.~~

376 Section R109.1 Types of inspections, including subsections, is hereby deleted in
377 its entirety and the following provisions shall be substituted therefor:

378 **R109.1 Types of inspections.** For onsite construction, from time to time the building
379 official, upon notification from the permit holder or his agent, shall make or cause to be
380 made any necessary inspections and shall either approve that portion of the
381 construction as completed or shall notify the permit holder or his or her agent wherein
382 the same fails to comply with this code. Construction or work for which a permit is
383 required shall be subject to inspection by the building official, and such construction or
384 work shall remain accessible and exposed for inspection purposes until approved.
385 Approval as a result of an inspection shall not be construed to be an approval of a
386 violation of the provisions of this code or of other ordinances of the jurisdiction.
387 Inspections presuming to give authority to violate or cancel the provisions of this code or
388 of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit
389 applicant to cause the work to remain accessible and exposed for inspection purposes.
390 Neither the building official nor the jurisdiction shall be liable for expense entailed in the
391 removal or replacement of any material required to allow inspection.

392 **R109.1.1 Footing and foundation inspections.** Inspection of the foundation
393 footings shall be made after poles or piers are set or and trenches or basement
394 areas are excavated, and any required forms erected and any required
395 reinforcing steel is in place and supported prior to the placing of concrete. The
396 foundation footing inspection shall include excavations for thickened slabs
397 intended for the support of bearing walls, partitions, structural supports, or

equipment and special requirements for wood foundations. The foundation wall inspection shall be made after the concrete forms are set and any required reinforcing steel is in place and supported.

R109.1.1.1 Wall bracing inspection. Inspection of the required braced wall lines and braced wall panels to verify compliance with applicable bracing requirements of sections R602.10 through R602.12 shall be made after the installation of wall sheathing and prior to installation of any housewrap or exterior wall covering. Required interior braced wall panels, including all required blocking and connections both above and below the panels shall also be in place. Required nailing/patterns for bracing shall be completed and ready for inspection. Rough-in of electrical, mechanical and plumbing systems shall not take place until approval of the wall bracing by the building official. The approved plans showing the location, methods used, minimum lengths, attachment specs, etc. shall be provided on the site for reference by the building official.

R109.1.2 Plumbing, mechanical, gas and electrical systems inspection. Rough inspection of plumbing, mechanical, gas and electrical systems shall be made prior to covering or concealment, before fixtures or appliances are set or installed, and prior to framing inspection.

Exception: Back-filling of ground-source heat pump loop systems tested in accordance with Section M2105.1 prior to inspection shall be permitted.

R109.1.3 Floodplain inspections. For construction in areas prone to flooding as established by Table R301.2(1), upon placement of the lowest floor, including

basement, and prior to further vertical construction, the building official shall require submission of documentation, prepared and sealed by a registered design professional, of the elevation of the lowest floor, including basement, required in Section R322.

R109.1.4 Frame and masonry inspection. Inspection of framing and masonry constructions shall be made after the roof, masonry, all framing, firestopping, draftstopping and bracing are in place and after the plumbing, mechanical and electrical rough inspections are approved.

R109.1.5 Other inspections. In addition to the called inspections above, the building official may make or require any other inspections to ascertain compliance with this code and other laws enforced by the building official. Before issuing a permit, the building official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

R109.1.5.1 Fire-resistance-rated construction inspection. Where fire-resistance-rated construction is required between dwelling units or due to location on property, the building official shall require an inspection of such construction after all lathing and/or wallboard is in place, but before any plaster is applied, or before wallboard joints and fasteners are taped and finished.

R109.1.6 Final inspection. Final inspection shall be made after the permitted work is complete and prior to occupancy.

Section 15. That section 14.55.180, Seismic Design Categories D1 and D2, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

444 **Seismic Design Categories D1 and D2Permit Completion.**

445 Section R-404.1.4, Seismic Design Categories D1 and D2, is hereby repealed.

446 Section R110 CERTIFICATE OF OCCUPANCY is hereby deleted in its entirety
447 and the following provisions shall be substituted therefor:

448 **PERMIT COMPLETION**

449 **R110.1 Use and occupancy.**

450 (a) No building or structure shall be used or occupied until all applicable
451 mechanical, plumbing, electrical and building “final inspections” have been completed
452 and passed. It shall be the duty of the permit holder to request all required inspections
453 and to complete the permit by passing the final inspection prior to occupancy or use of
454 the building. No change in the existing occupancy classification of a building or
455 structure or portion thereof shall be made until all required inspections and permits have
456 been completed and approved by the building official. Completion of a permit shall not
457 be construed as an approval of a violation of the provisions of this code or of other
458 ordinances.

459 (b) Notwithstanding subsection (a) and absent a waiver pursuant to
460 subsection (c), a final inspection shall not be completed and passed unless driveway
461 approaches have been installed and sidewalks constructed along all adjoining rights-of-
462 way of the subject lot or all lots or portions thereof joined to it or are the subject of a
463 contract as part of a benefit district created pursuant to K.S.A. 12-6a01 et seq. or Article
464 XII of the Topeka Municipal Code.

465 (c) The director of public works or designee may waive the requirement in
466 subsection (b) if any of the following conditions applies:

467 (1) Plats approved prior to January 1, 2001, where more than 50% of
468 the lots have been developed, but less than 50% of the completed homes on that
469 block and side of the street have sidewalks in a subdivision.

470 (2) The sidewalk is the subject of a waiver granted in conjunction with
471 approval of the subdivision plat.

472 (3) Unique circumstances exist where the public works director or
473 designee determine that the subject sidewalk link would not be part of a viable
474 sidewalk system in that community or conditions exist whereby construction of
475 the sidewalk is impractical.

476 (4) The home is located on a corner lot or double-frontage lot and the
477 sidewalk link along one of the lot's two frontages meets one of the waiver criteria
478 in subsection (c).

479 (5) Weather conditions prevented installation of the driveway
480 approaches or construction of the sidewalks. However, in such event, the
481 property owner shall install driveway approaches and construct sidewalks within
482 90 days from the date of the final inspection.

483 **R110.2 Change in use.** Changes in the character or use of an existing structure shall
484 not be made except as specified in Sections 3406 and 3407 of the International Building
485 Code.

486 **R110.3 Temporary occupancy.** The building official is authorized to allow use and/or
487 occupancy before the completion of the entire work covered by the permit, provided that
488 such portion or portions shall be occupied safely. The building official may upon the
489 request of the permit holder set a time period during which the temporary use and/or

occupancy is valid. The conditions of temporary use and/or occupancy and specified time period shall be in writing. The permit holder is responsible for permit completion per R110.1.

R110.4 Revocation. The building official may, in writing, suspend or revoke use and/or occupancy allowed under the provisions of this code, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

Section 16. That section 14.55.190, Foundation walls thickness based on walls supported, of The Code of the City of Topeka, Kansas, is amended to read as follows:

Foundation walls thickness based on walls supported**Notice of violation.**

~~Section R-404.1.5, Foundation wall thickness based on walls supported, is hereby repealed.~~

Section R113.2 Notice of violation is hereby deleted in its entirety and the following provisions shall be substituted therefor:

The building official is authorized to serve a notice of violation or order on the permit holder, property owner, or the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition or occupancy of a building or structure in violation of the provisions of this code, or in violation of a detail statement or a plan approved thereunder, or in violation of a permit issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation. Any permit holder, property owner, contractor or individual who has been served with a notice of violation and who has not appealed or

corrected such violation within ten (10) days shall be deemed ineligible to receive any new or additional building permits until such time as the violation is corrected.

Section 17. That section 14.55.200, Pier and curtain wall foundations, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Pier and curtain wall foundations~~Violation penalties.~~

~~Section R-404.1.5.1, Pier and curtain wall foundations, is hereby repealed.~~

Section R113.4 Violation penalties is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit issued under the provisions of this code, shall be guilty of a misdemeanor and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued or permitted, and upon conviction of any such violation such person shall be punishable by a fine or imprisonment, or by both such fine and imprisonment as prescribed by law.

Section 18. That section 14.55.210, Foundation walls, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Foundation walls~~Unlawful continuance.~~

~~Section R-404, Foundation walls, is hereby amended to read as follows:~~

~~Masonry and concrete foundation walls eight feet (8 ft.) or less in height shall be constructed using the following criteria:~~

~~Minimum width: eight inches (8 in.) supporting two (2) floors or less. Ten inches (10 in.) supporting three (3) floors.~~

~~Vertical reinforcing: Number four (#4) bars at twenty-four inches (24 in.) on center placed on the outer third (3rd) of the wall but not closer than one and one half inches (1-1/2 in.) to the edge.~~

~~Horizontal reinforcing: Number four (#4) bars placed in the following manner:~~

~~First (1st) bar, three feet (3 ft.) above footing.~~

~~Second (2nd) bar, five feet (5 ft.) above footing.~~

~~Third (3rd) and fourth (4th) bars in the upper twelve inches (12 in.) of the wall at least two inches (2 in.) apart with three inches (3 in.) of coverage.~~

~~Horizontal bars shall be wired in place prior to pouring of concrete.~~

~~Where unstable soil conditions exist an engineer shall design the footing and foundation based upon a soil report.~~

Section R114.2 Unlawful continuance is hereby deleted in its entirety and the following provisions shall be substituted therefor:

It shall be unlawful for any person to continue to work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition. Failure to abide by this provision may result in penalties prescribed in TMC 1.10.070.

Section 19. That section 14.55.220, Concrete and masonry foundation waterproofing, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Concrete and masonry foundation waterproofing Definitions.

Section R-406.2, Concrete and masonry foundation waterproofing, is hereby amended to read as follows:

~~In areas where a high water table or other severe soil water conditions are known to exist, exterior foundation walls that retain earth and enclose habitable or usable spaces located below grade shall be waterproofed with a membrane extending from the top of the footing to the finished grade. The membrane shall consist of two (2) ply hot-mopped felts, fifty-five pounds (55 lbs.)(25 kg) roll roofing, six (6) mil (0.15 mm) polyvinyl chloride, six (6) mil (0.15 mm) polyethylene or forty (40) mil (1 mm) polymer-modified asphalt. The joints in the membrane shall be lapped and sealed with an adhesive compatible with the waterproofing membrane.~~

Exceptions:

1. ~~Organic solvent based products such as hydrocarbons, chlorinated hydrocarbons, ketones and esters shall not be used for ICF walls with expanded polystyrene form material. Plastic roofing cements, acrylic coatings, latex coatings, mortars and pargings are permitted to be used to seal ICF walls. Cold setting asphalt or hot asphalt shall conform to type C of ASTM D 449. Hot asphalt shall be applied at a temperature of less than two hundred degrees (200°).~~

2. ~~Exterior foundation walls of concrete construction enclosing basements may be dampproofed by applying an equivalent coat of approved bituminous material to the wall from the footing to the finish grade at the recommended rate. Basement walls may be dampproofed or waterproofed using materials or methods of construction other than covered in this section where approved by the building official.~~

Section R202 Definitions, is hereby amended by the addition of the following language:

FUEL-FIRED APPLIANCES. Any appliance or equipment that uses a fuel that produces, among other things, carbon monoxide during the combustion (burning) process. Examples of types of fuel include, but are not limited to coal, charcoal, wood, kerosene, building heating oil, natural (methane) gas, and liquefied petroleum gas, such as propane. Examples of fuel burning appliances include, but are not limited to, building heaters, portable kerosene heaters, fireplaces, wood burning stoves, cooking appliances, water heaters, or clothes dryers that are fuel fired.

Section 20. That section 14.55.230, Lateral restraint at supports, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Lateral restraint at supportsIRC TABLE R301.2(1).

~~Section R-502.7, Lateral restraint at supports, is hereby amended to read as follows:~~

~~Joists shall be supported laterally at the ends by full-depth solid blocking not less than two inches (2 in.)(51 mm) nominal in thickness; or by attachment to a header, band, or rim joist, or to an adjoining stud; or shall be otherwise provided with lateral support to prevent rotation.~~

~~Exception: Solid blocking may be omitted over interior supports when supporting only one floor level and the roof.~~

Table R301.2(1) is hereby deleted in its entirety and the follow table shall be substituted therefor:

IRC TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

<u>Ground Snow Load</u>	<u>WIND DESIGN</u>		<u>Seismic Design Category^f</u>	<u>SUBJECT TO DAMAGE FROM</u>			<u>Winter Design Temp^e</u>	<u>Ice Barrier Under- layment Required^h</u>	<u>Flood Hazards^g</u>	<u>Air Freezing Indexⁱ</u>	<u>Mean Annual Temp^j</u>
	<u>Speed^d (mph)</u>	<u>Topographic Effects^k</u>		<u>Weathering^a</u>	<u>Frost line depth^b</u>	<u>Termite^c</u>					

<u>20#</u>	<u>90</u>	<u>NO</u>	<u>B</u>	<u>Severe</u>	<u>36"</u>	<u>Moderate</u> <u>To</u> <u>Heavy</u>	<u>4</u>	<u>NO</u>	<u>Oct 23, 1971, entry into National Flood Insurance Program. Current maps dated September 29, 2011, entitled "Flood Insurance Rate Map for Shawnee County KS"</u>	<u>1000</u>	<u>54.3</u>
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For SI: 1 pound per square foot = 0.0479 kN/m², 1 mile = 1.609km/h.

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.

b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.

d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on site-specific basis in accordance with Section R301.2.1.4.

e. The outdoor design dry-bulb temperature shall be selected from the columns of 97 1/2-percent values for winter from Appendix D of the International Plumbing Code. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.

f. The jurisdiction shall fill in this part of the table with the Seismic Design Category determined from Section R301.2.2.1.

g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.

h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."

i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

Section 21. That section 14.55.240, Drilling and notching -- Studs, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Drilling and notching – Studs Townhouses.

~~Section R-602.6, Drilling and notching – Studs, is hereby amended to read as follows:~~

~~A stud shall not be notched more than twenty-five percent (25%) of its width in a bearing wall and no more than forty percent (40%) its width in a nonbearing wall.~~

~~Drilling studs shall have the following limitations:~~

~~Two by four (2x4): Limited to a two inch (2 in.) hole, centered.~~

~~Two by six (2x6): Limited to a three and one-half inch (3-1/2 in.) hole, centered.~~

Note: ~~When drilling more than twenty-five percent (25%) of the stud width, you shall not go through more than three (3) consecutive studs.~~

Except for Sections R302.2.1, R302.2.2, R302.2.3 and R302.2.4, Section R302.2 Townhouses is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

Exceptions:

1. A common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses where an automatic sprinkler system is installed in accordance with NFPA 13R or NFPA 13, if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with the currently adopted edition of the National Electrical Code. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

2. A common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical

installations shall be installed in accordance with the currently adopted edition of the National Electrical Code. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

Section 22. That section 14.55.250, Lumber sheathing, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Lumber sheathing**Structural independence.**

Section R-803.1, Lumber sheathing, is hereby amended to read as follows:

~~Allowable spans for lumber used as roof sheathing shall conform to Table R803.1. Spaced lumber sheathing for wood shingle and shake roofing shall conform to the requirements of Sections R905.7 and R905.8. Spaced lumber sheathing is not allowed in Seismic Design Category D2.~~

Table R803.1
Minimum thickness of lumber roof sheathing

RAFTER OR BEAM SPACING (Inches)	MINIMUM NET THICKNESS (Inches)
24	1/2 ^a
48 ^b 60 ^c	
72 ^d	1-1/2 T & G

a. Exception: 7/16 inch may be permitted if secured by "H" clips.

b. Minimum 270 F_b, 340,000 E.

c. Minimum 420 F_b, 660,000 E.

d. Minimum 600 F_b, 1,150,000 E.

Section 302.2.4 Structural independence is hereby deleted in its entirety and the following provisions shall be substituted therefor:

697 Each individual townhouse shall be structurally independent.

698 **Exceptions:**

699 1. Foundations supporting exterior walls or common walls.

700 2. Structural roof and wall sheathing from each unit may fasten to the
701 common wall framing.

702 3. Nonstructural wall and roof coverings.

703 4. Flashing at termination of roof covering over common wall.

704 5. Townhouses separated by a common 2-hour fire-resistance-rated wall, or
705 1-hour fire-resistance-rated wall when equipped with an automatic sprinkler system as
706 provided in Section R302.2.

707 Section 23. That section 14.55.260, Attic access, of The Code of the City of
708 Topeka, Kansas, is hereby amended to read as follows:

709 **Attic accessTwo-family dwellings.**

710 ~~Section R-807.1, Attic access, is hereby amended to read as follows:~~

711 ~~In buildings with combustible ceiling or roof construction, an attic access opening shall~~
712 ~~be provided to attic areas that exceed thirty square feet (30 ft.²)(2.8 m²) and have a~~
713 ~~vertical height of thirty inches (30 in.)(762 mm) or greater.~~

714 ~~A readily accessible attic access framed opening not less than twenty-two inches (22~~
715 ~~in.) by twenty-four inches (24 in.) shall be provided to any attic area having a clear~~
716 ~~height of over thirty inches (30 in.).~~

717 Except for Section R302.3.1, Section R302.3 Two-family dwellings is hereby
718 deleted in its entirety and the following provisions shall be substituted therefor:

Dwelling units in two-family dwellings shall be separated from each other by wall and/or floor assemblies having not less than a 1-hour fire-resistance rating when tested in accordance with ASTM E 119 or UL 263. Fire-resistance-rated floor-ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.

Exceptions:

A fire-resistance rating of $\frac{1}{2}$ hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.

Section 24. That section 14.55.270, International Residential Code, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

International Residential Code Duct penetration.

~~Appendix F, Radon Control Methods, is hereby adopted and amended to read as follows:~~

~~NEW CONSTRUCTION RADON CONTROL METHODS FOR THE CITY OF TOPEKA~~

~~SECTION AF101. SCOPE~~

~~AF101.1 General. This appendix contains requirements for new construction in jurisdictions where radon-resistant construction is required.~~

~~Inclusion of this appendix by jurisdictions shall be determined through the use of locally available data or determination of Zone 1 designation in Figure AF101.~~

~~SECTION AF102. DEFINITIONS~~

~~AF102.1 General. For the purpose of these requirements, the terms used shall be defined as follows:~~

~~SUB-SLAB DEPRESSURIZATION SYSTEM (Passive). A system designated to achieve lower sub-slab air pressure relative to indoor air pressure by use of a vent pipe routed through the conditioned space of a building and connecting the sub-slab area with outdoor air, thereby relying on the convective flow of air upward in the vent to draw air from beneath the slab.~~

~~SUB-SLAB DEPRESSURIZATION SYSTEM (Active). A system designed to achieve lower sub-slab air pressure relative to indoor air pressure by use of a fan-powered vent drawing air from beneath the slab.~~

~~DRAIN TILE LOOP. A continuous length of drain tile or perforated pipe extending around all or part of the internal or external perimeter of a basement or crawl space footing.~~

~~RADON GAS. A naturally occurring, chemically inert, radioactive gas that is not detectable by human senses. As a gas, it can move readily through particles of soil and rock and can accumulate under the slabs and foundations of homes where it can easily enter into living space through construction cracks and openings.~~

~~SOIL-GAS-RETARDER. A continuous membrane of 6-mil (0.15 mm) polyethylene or other equivalent material used to retard the flow of soil gases into a building.~~

~~SUB-MEMBRANE DEPRESSURIZATION SYSTEM. A system designed to achieve lower sub-membrane air pressure relative to crawl space air pressure by use of a vent drawing air from beneath the soil-gas-retarder membrane.~~

~~SECTION AF103. REQUIREMENTS~~

~~AF103.1 General. The following construction techniques are intended to resist radon entry and prepare the building for post-construction radon mitigation, if necessary (see~~

~~Figure AF102). These techniques are required in areas where designated by the jurisdiction.~~

~~AF103.2 Subfloor preparation. A layer of gas-permeable material shall be placed under all concrete slabs and other floor systems that directly contact the ground and are within the walls of the living spaces of the building, to facilitate future installation of a sub-slab depressurization system, if needed. The gas-permeable layer shall consist of one of the following:~~

~~1. A uniform layer of clean aggregate, a minimum of 4 inches (102 mm) thick. The aggregate shall consist of material that will pass through a 2-inch (51 mm) sieve and be retained by a 1/4-inch (6.4 mm) sieve.~~

~~2. A uniform layer of sand (native or fill), a minimum of 4 inches (102 mm) thick, overlain by a layer or strips of geotextile drainage matting designed to allow the lateral flow of soil gases.~~

~~3. A uniform layer of sand or native fill a minimum of 4 inches (102 mm) thick, with a minimum 2 inch (51 mm) diameter interior perimeter drain tile loop laid approximately 12 inches inside the internal perimeter of the foundation footing.~~

~~4. Other materials, systems or floor designs with demonstrated capability to permit depressurization across the entire sub-floor area.~~

~~AF103.3 Soil-gas-retarder. It is recommended, but not required, that a minimum 6-mil (0.15 mm) [or 3-mil (0.075 mm) cross-laminated] polyethylene or equivalent flexible sheeting material shall be placed on top of the gas-permeable layer prior to casting the slab or placing the floor assembly to serve as a soil-gas-retarder by bridging any cracks that develop in the slab or floor assembly and to prevent concrete from entering the void~~

~~spaces in the aggregate base material. If utilized, the sheeting shall cover the entire floor area with separate sections of sheeting lapped at least 12 inches (305 mm). The sheeting shall fit closely around the pipe, wire or other penetrations of the material. All punctures or tears in the material shall be sealed or covered with additional sheeting.~~

~~AF103.4 ENTRY ROUTES. It is recommended, but not required, that potential radon entry routes be closed in accordance with Sections AF103.4.1 through AF103.4.10. Notwithstanding the foregoing, the covering of sump pits as described in Section AF103.4.4 is required.~~

~~AF103.4.1 Floor openings. Openings around bathtubs, showers, water closets, pipes, wires or other objects that penetrate basement or slab on grade concrete slabs shall be filled with polyurethane caulk or equivalent sealant applied in accordance with the manufacturer's recommendations.~~

~~AF103.4.2 Concrete joints. All control joints, isolation joints, construction joints and any other joints in concrete slabs or between slabs or foundation walls shall be sealed with a caulk or sealant. Gaps and joints shall be cleared of loose material and filled with polyurethane caulk or other elastomeric sealant applied in accordance with the manufacturer's recommendations.~~

~~AF103.4.3 Condensate drains. Condensate drains shall be trapped or routed through nonperforated pipe to daylight.~~

~~AF103.4.4 Sumps. Sump pits open to soil or serving as the termination point for sub-slab or exterior drain tile loops shall be covered with a gasketed or otherwise sealed lid. Sumps used as the suction point in a sub-slab depressurization system shall have a lid~~

designed to accommodate the vent pipe. Sumps used as a floor drain shall have a lid equipped with a trapped inlet.

~~AF103.4.5 Foundation walls. Hollow block masonry foundation walls shall be constructed with either a continuous course of solid masonry, one course of masonry grouted solid, or a solid concrete beam at or above finished ground surface to prevent passage of air from the interior of the wall into the living space. Where a brick veneer or other masonry ledge is installed, the course immediately below that ledge shall be sealed. Joints, cracks or other openings around all penetrations of both exterior and interior surfaces of masonry block or wood foundation walls below the ground surface shall be filled with polyurethane caulk or equivalent sealant. Penetrations of concrete walls shall be filled.~~

~~AF103.4.6 Dampproofing. The exterior surfaces of portions of concrete and masonry block walls below the ground surface shall be dampproofed in accordance with Section R406 of this code.~~

~~AF103.4.7 Air-handling units. Air-handling units in crawl spaces shall be sealed to prevent air from being drawn into the unit.~~

~~Exception: Units with gasketed seams or units that are otherwise sealed by the manufacturer to prevent leakage.~~

~~AF103.4.8 Ducts. Ductwork passing through a crawl space or beneath a slab shall be of seamless material unless the air-handling system is designed to maintain continuous positive pressure within such ducting. Joints in such ductwork shall be sealed to prevent air leakage.~~

~~AF103.4.9 Crawl space floors. Openings around all penetrations through floors above crawl spaces shall be caulked or otherwise filled to prevent air leakage.~~

~~AF103.4.10 Crawl space access. Access doors and other openings or penetrations between basements and adjoining crawl spaces shall be closed, gasketed or otherwise filled to prevent air leakage.~~

~~AF103.5 Passive sub-membrane depressurization system. In buildings with crawl space foundations, the following components of a passive sub-membrane depressurization system shall be installed during construction.~~

~~Exception: Buildings in which an approved mechanical crawl space ventilation system or other equivalent system is installed.~~

~~AF103.5.1 Ventilation. Crawl spaces shall be provided with vents to the exterior of the building. The minimum net area of ventilation openings shall comply with Section R408.1 of this code.~~

~~AF103.5.2 Soil-gas-retarder. The soil in crawl spaces shall be covered with a continuous layer of minimum 6 mil (0.15 mm) polyethylene soil-gas-retarder. The ground cover shall be lapped a minimum of 12 inches (305 mm) at joints and shall extend to all information walls enclosing the crawl space area. It is recommended that acoustical sealant, butyl rubber, or butyl acrylic caulks be used to provide adhesion to the polyethylene sheeting. Polyurethane caulk will also provide some adhesion to the polyethylene sheeting. Seams between adjoining sheets of sheeting are usually sealed by applying a continuous bead of sealant between the sheeting in the 12-inch strip where the sheets overlap. Plastic should be secured to the wall at 6 to 12 inches above the crawlspace floor with a 1/2 inch wide bead of acoustical sealant or butyl caulk along~~

the wall. For a more durable connection mechanical fasteners, such as strapping, should be considered, to hold the plastic to the wall.

~~AF103.5.3 Vent pipe. A plumbing tee (2 inch minimum diameter) or other approved connection shall be inserted horizontally beneath the sheeting and connected to a 3- or 4-inch diameter (76 mm or 102 mm) fitting with a vertical vent pipe installed through the sheeting. The vent pipe shall be extended up through the building floors, terminate at least 12 inches (305 mm) above the roof in a location at least 10 feet (3048 mm) away from any window or other opening into the conditioned spaces of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) away from any window or other opening into the conditioned spaces of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) from any window or other adjoining or adjacent buildings.~~

~~AF103.6 Passive sub-slab depressurization system. In basement or slab-on-grade buildings, the following components of a passive sub-slab depressurization system shall be installed during construction.~~

~~AF103.6.1 Vent pipe. A minimum 3-inch-diameter (76 mm), ABS, PVC or equivalent gas-tight pipe shall be embedded vertically into a "T" fitting (2 inch minimum diameter) or equivalent method to be used to ensure that the pipe opening remains within the sub-slab permeable material. Alternatively, the 3-inch (76 mm) pipe shall be inserted directly into an interior perimeter drain tile loop or through a sealed sump cover where the sump is exposed to the sub-slab aggregate or connected to it through a drainage system.~~

~~The pipe shall be extended up through the building floors, terminate at least 12 inches (305 mm) above the surface of the roof in a location at least 10 feet (3048 mm) away~~

from any window or other opening into the conditioned spaces of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) from any window or other opening in adjoining or adjacent buildings.

~~AF103.6.2 Multiple vent pipes. In buildings where interior footings or other barriers separate the sub-slab aggregate or other gas-permeable material, each area shall be fitted with an individual vent pipe. Vent pipes shall connect to a single vent that terminates above the roof or each individual vent pipe shall terminate separately above the roof.~~

~~AF103.7 Vent pipe drainage. All components of the radon vent pipe system shall be installed to provide positive drainage to the ground beneath the slab or soil-gas-retarder.~~

~~AF103.8 Vent pipe accessibility. Radon vent pipes shall be accessible for future fan installation through an attic or other area outside the habitable space.~~

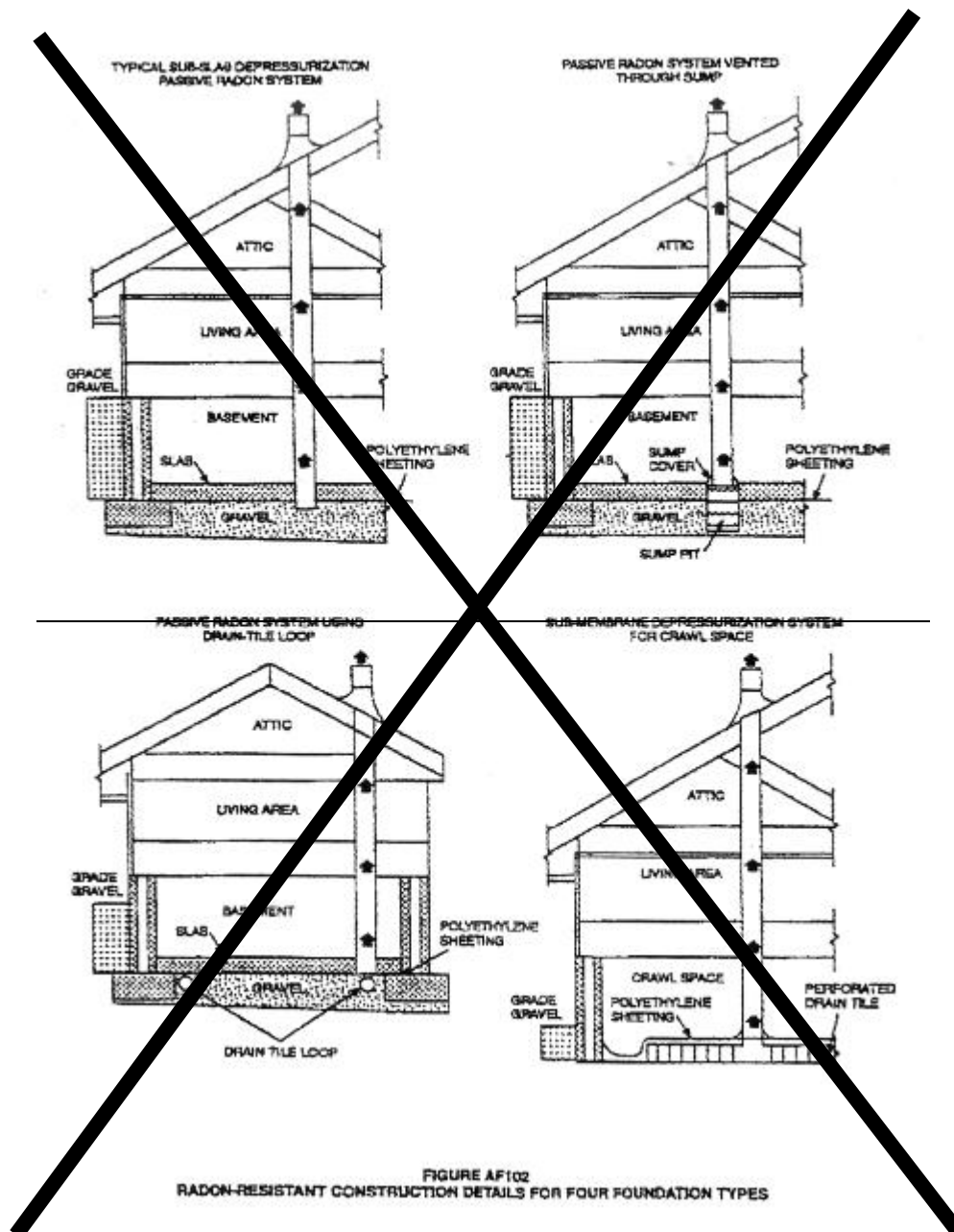
~~Exception: The radon vent pipe need not be accessible in an attic space where an approved roof-top electrical supply is provided for future use.~~

~~AF103.9 Vent pipe identification. All exposed and visible interior radon vent pipes shall be identified with at least one label on each floor and in accessible attics. The label shall read: "Radon Reduction System."~~

~~AF103.10 Combination foundations. Combination basement/crawl space or slab-on-grade/crawl space foundations shall have separate radon vent pipes installed in each type of roof or shall be connected to a single vent that terminates above the roof.~~

~~AF103.11 Building depressurization. Joints in air ducts and plenums in unconditioned spaces shall meet the requirements of Section M1601. Thermal envelope air infiltration~~

requirements shall comply with the energy conservation provisions in Chapter 11.
Firestopping shall meet the requirements contained in Section R602.8.
AF103.12 Power source. To provide for future installation of an active sub-membrane or
sub-slab depressurization system, an electrical circuit terminated in an approved box
shall be installed during construction in the attic or other anticipated locations of vent
pipe fans.



908 Section R302.5.2 Duct penetration is hereby deleted in its entirety and the
909 following provisions shall be substituted therefor:

910 Ducts in the garage and ducts penetrating the walls or ceilings separating the
911 dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm)
912 sheet steel or other approved material and shall have no openings into the garage and
913 shall be protected as required by Section R302.11(4).

914 Section 25. That The Code of the City of Topeka, Kansas, is hereby amended
915 by adding a section, to be numbered 14.55.280, which said section reads as follows:

916 **Habitable rooms.**

917 Section R303.1 Habitable rooms is hereby deleted in its entirety.

918 Section 26. That The Code of the City of Topeka, Kansas, is hereby amended
919 by adding a section, to be numbered 14.55.290, which said section reads as follows:

920 **Bathrooms.**

921 Section R303.3 Bathrooms is hereby deleted in its entirety and the following
922 provisions shall be substituted therefor:

923 Bathrooms, water closet compartments and other similar rooms shall be provided
924 with a mechanical ventilation system. The minimum ventilation rates shall be 50 cubic
925 feet per minute (24 L/s) for intermittent ventilation or 20 cubic feet per minute (10 L/s)
926 for continuous ventilation. Ventilation air from the space shall be exhausted directly to
927 the outside.

928 Section 27. That The Code of the City of Topeka, Kansas, is hereby amended
929 by adding a section, to be numbered 14.55.300, which said section reads as follows:

930 **Adjoining rooms.**

931 Section R303.2 Adjoining rooms is hereby deleted in its entirety.

932 Section 28. That The Code of the City of Topeka, Kansas, is hereby amended
933 by adding a section, to be numbered 14.55.310, which said section reads as follows:

934 **Opening location.**

935 Section R303.4 Opening location is hereby deleted in its entirety.

936 Section 29. That The Code of the City of Topeka, Kansas, is hereby amended
937 by adding a section, to be numbered 14.55.320, which said section reads as follows:

938 **Outside opening protection.**

939 Section R303.5 Outside opening protection is hereby deleted in its entirety.

940 Section 30. That The Code of the City of Topeka, Kansas, is hereby amended
941 by adding a section, to be numbered 14.55.330, which said section reads as follows:

942 **Stairway illumination.**

943 Section R303.6 Stairway illumination, is hereby deleted in its entirety and the
944 following provisions shall be substituted therefor:

945 All interior stairways shall be provided with a means to illuminate the stairs,
946 including the landings and treads. Interior stairways shall be provided with an artificial
947 light source located in the immediate vicinity of each landing of the stairway. For interior
948 stairs the artificial light sources shall be capable of illuminating treads and landings to
949 levels not less than 1 foot-candle (11 lux) measured at the center of treads and
950 landings. Exterior stairways providing access to a basement from the outside grade
951 level shall be provided with an artificial light source located in the immediate vicinity of
952 the bottom landing of the stairway. Artificial light source location requirements for
953 stairways shall comply with the currently adopted edition of the National Electrical Code.

Exception: An artificial light source is not required at the top and bottom landing, provided an artificial light source is located directly over each stairway section.

Section 31. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.340, which said section reads as follows:

Required glazed openings.

Section R303.7 Required glazed openings, including subsection, is hereby deleted in its entirety.

Section 32. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.350, which said section reads as follows:

Minimum room areas.

Section R304 MINIMUM ROOM AREAS is hereby deleted in its entirety and the following provisions shall be substituted therefor:

MINIMUM ROOM AREAS

R304.1 Minimum area. Every dwelling unit shall have at least one habitable room that shall have not less than 150 square feet of floor area, excluding a bedroom.

R304.2 Other rooms. Other habitable rooms shall have a floor area of not less than 70 square feet, except bedrooms must have a minimum area of 90 square feet. Multi-bedroom dwelling units shall contain at least one (1) bedroom with 120 square feet of floor area. Every kitchen shall have not less than 50 square feet of floor area. Measurement shall be made from inside wall to inside wall.

R304.3 Minimum dimensions. Habitable rooms shall not be less than 7 feet (2134 mm) in any horizontal dimension.

Exceptions: Kitchens.

R304.4 Height effect on room area. Portions of a room with a sloping ceiling measuring less than 5 feet (1524 mm) or a furred ceiling measuring less than 7 feet (2135 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required habitable area for that room.

Section 33. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.360, which said section reads as follows:

Emergency escape and rescue required.

Except for Sections R310.1.1, R310.1.2, R310.1.3 and R310.1.4, Section R310.1 Emergency escape and rescue required is hereby deleted in its entirety and the following provisions shall be substituted therefor:

All new basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2. Emergency escape

and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

Exception: Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m²).

Section 34. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.370, which said section reads as follows:

Riser height.

Section R311.7.4.1 Riser height is hereby deleted in its entirety and the following provisions shall be substituted therefor:

The maximum riser height shall be 7³/₄ inches (196 mm); the minimum riser height shall be not less than 4 inches (102 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than ³/₈ inch (9.5 mm).

Section 35. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.380, which said section reads as follows:

Continuity.

Section R311.7.7.2 Continuity is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1¹/₂ inch (38 mm) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn.

2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

3. Where walls are non-continuous, alternative non-continuous handrails may be approved by the building official on a case-by-case basis.

Section 36. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.390, which said section reads as follows:

Seat or bench elements.

Section R312.5 Seat or bench elements is hereby created by the addition of the following provisions:

Guards which incorporate seat or bench elements shall have a guard system complying with R312.2 and R312.3 to a height of 36 inches measured from the seat surface. The guard system shall also extend to the floor surface below the seat or bench element.

Exceptions:

1. Porches, balconies or raised floors 30 inches or less above the floor or grade below.

2. Freestanding moveable seat and bench elements.

Section 37. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.400, which said section reads as follows:

Automatic fire sprinkler systems.

Section R313 AUTOMATIC FIRE SPRINKLER SYSTEMS is hereby deleted in its entirety and the following provisions shall be substituted therefor:

AUTOMATIC FIRE SPRINKLER SYSTEMS

R313.1 Townhouse automatic fire sprinkler systems design. An automatic residential fire sprinkler system installed in townhouses shall be designed and installed in accordance with NFPA 13R or NFPA 13 and the currently adopted edition of the Uniform Plumbing Code.

R313.2 One- and two-family dwellings automatic fire system design. An automatic residential fire sprinkler system installed in one- and two-family dwellings shall be designed and installed in accordance with NFPA 13D and the currently adopted edition of the Uniform Plumbing Code.

Section 38. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.410, which said section reads as follows:

Carbon Monoxide Alarms.

Section R315 CARBON MONOXIDE ALARMS is hereby deleted in its entirety and the following provisions shall be substituted therefor:

CARBON MONOXIDE ALARMS

R315.1 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm, capable of detection and alarm, shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

R315.2 Where required in existing dwellings. Where work requiring a permit occurs, or when one or more sleeping rooms are added or created in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section R315.1.

Exception:

Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.

R315.3 Alarm requirements. Every carbon monoxide alarm shall bear the label of a nationally recognized standard testing laboratory, such as Underwriter's Laboratories, indicating that it is appropriate for its intended use. Carbon monoxide alarms shall be installed in accordance with this code and the manufacturer's installation instructions. Combination smoke and carbon monoxide alarms shall be permitted. If the alarm is a combination smoke and carbon monoxide alarm, it shall be located in accordance with the installation requirements for smoke alarms in regards to height, distance from inside corners, etc.

R315.4 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Where more than one hard-wired carbon monoxide alarm is required to be installed in a dwelling unit the alarms shall be interconnected so the activation of one

alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Carbon monoxide alarms shall be permitted to be battery operated when installed in buildings without commercial power.

2. Interconnection and hard-wiring of carbon monoxide alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard wiring and interconnection without the removal of interior finishes.

Section 39. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.420, which said section reads as follows:

Footings-General.

Section R403.1 General is hereby deleted in its entirety and the following provisions shall be substituted therefor:

All exterior walls, foundation walls, bearing walls and support columns shall be supported on continuous concrete footings with minimum widths conforming to Table R403.1 and rebar reinforcement conforming to City of Topeka specifications for foundation walls and footings. Other approved engineered structural systems which shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character of the soil shall be allowed. Footings shall be supported on undisturbed natural soils or approved engineered fill. Concrete footing shall be designed and

constructed in accordance with the provisions of Section R403 or in accordance with ACI 332.

Section 40. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.430, which said section reads as follows:

Table R403.1 is hereby deleted in its entirety and the follow table shall be substituted therefor:

TABLE R403.1 MINIMUM WIDTH OF CONCRETE, PRECAST OR MASONRY

FOOTINGS (inches)^a

	<u>LOAD-BEARING VALUE OF SOIL (psf)</u>			
	<u>1,500</u>	<u>2,000</u>	<u>3,000</u>	<u>≥ 4,000</u>
<u>Conventional light-frame construction</u>				
<u>1-story</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>
<u>2-story</u>	<u>16</u>	<u>15</u>	<u>12</u>	<u>12</u>
<u>3-story</u>	<u>23</u>	<u>18</u>	<u>12</u>	<u>12</u>
<u>4-inch brick veneer over light frame or 8-inch hollow concrete masonry</u>				
<u>1-story</u>	<u>15</u>	<u>12</u>	<u>12</u>	<u>12</u>
<u>2-story</u>	<u>21</u>	<u>18</u>	<u>12</u>	<u>12</u>
<u>3-story</u>	<u>32</u>	<u>24</u>	<u>16</u>	<u>12</u>
<u>8-inch solid or fully grouted masonry</u>				
<u>1-story</u>	<u>18</u>	<u>15</u>	<u>12</u>	<u>12</u>
<u>2-story</u>	<u>29</u>	<u>21</u>	<u>14</u>	<u>12</u>
<u>3-story</u>	<u>42</u>	<u>32</u>	<u>21</u>	<u>16</u>

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

a. Where minimum footing width is 12 inches, use of a single wythe of solid or fully grouted 12-inch nominal concrete masonry units is permitted.

Section 41. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.440, which said section reads as follows:

Minimum size.

Section R403.1.1 Minimum size is hereby deleted in its entirety and the following provisions shall be substituted therefor:

1125 Minimum sizes for concrete footings shall be as set forth in Table R403.1 and
1126 Figure R403.1(1). The footing width, W, shall be based on the load-bearing value of the
1127 soil in accordance with Table R401.4.1. Spread footings shall be at least 8 inches (152
1128 mm) in thickness when supporting conventional light frame construction and 10 inches
1129 in thickness when supporting walls having a 4 inch brick veneer but never less in
1130 thickness than engineered specifications or City of Topeka specification requirements.
1131 T. Footing projections, P, shall be at least 2 inches (51 mm) and shall not exceed the
1132 thickness of the footing. The size of footings supporting piers and columns shall be
1133 based on the tributary load and allowable soil pressure in accordance with Table
1134 R401.4.1. Footings for wood foundations shall be in accordance with the details set
1135 forth in Section R403.2, and Figures R403.1(2) and R403.1(3).

1136 Section 42. That The Code of the City of Topeka, Kansas, is hereby amended
1137 by adding a section, to be numbered 14.55.450, which said section reads as follows:

1138 **Foundations and stemwalls.**

1139 Section R403.1.3.1 Foundations with stemwalls is hereby deleted in its entirety
1140 and the following provisions shall be substituted therefor:

1141 Foundations with stem walls shall have installed a minimum of one No. 4 bar
1142 located in the top 12 inches of the wall and one No. 4 bar located 3 inches (76 mm) to 4
1143 inches (102 mm) from the bottom of the footing. Horizontal bar spacing shall be 24
1144 inches o.c. maximum. Vertical reinforcement shall be No. 4 bars spaced 24 inches o.c.
1145 maximum.

1146 Section 43. That The Code of the City of Topeka, Kansas, is hereby amended
1147 by adding a section, to be numbered 14.55.460, which said section reads as follows:

Slabs-on-ground with turned-down footings.

Section R403.1.3.2 Slabs-on-ground with turned-down footings is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Slabs on ground with turned down footings shall have a minimum of one No. 4 bar at the top and the bottom of the footing. Vertical reinforcement shall be No. 4 bars spaced 24 inches o.c. maximum. Floating footings for detached garages and storage sheds shall have reinforcement conforming to City of Topeka specifications.

Section 44. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.470, which said section reads as follows:

Minimum depth.

Section R403.1.4 Minimum depth is hereby deleted in its entirety and the following provisions shall be substituted therefor:

All exterior footings shall be placed at least 36 inches (305 mm) below the final grade. Where applicable, the depth of footings shall also conform to Sections R403.1.4.1 through R403.1.4.2.

Exception: Floating footings for detached garages and storage sheds 24 feet x 24 feet and under when constructed per City of Topeka specifications.

Section 45. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.480, which said section reads as follows:

Frost protection.

Section R403.1.4.1 Frost protection is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Except where otherwise protected from frost, and in floating footings allowed by City of Topeka specifications, all foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. Extended below the frost line specified in Table R301.2.(1);
2. Constructing in accordance with Section R403.3; or
3. Erected on solid rock which extends below the frost line.

Footings shall not bear on frozen soil unless the frozen condition is permanent.

Section 46. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.490, which said section reads as follows:

Foundation elevation.

Section 403.1.7.3 Foundation elevation is hereby deleted in its entirety.

Section 47. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.500, which said section reads as follows:

Foundations on expansive soils.

Section R403.1.8 Foundations on expansive soil is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Foundation and floor slabs for buildings located on expansive soils shall be of engineered design.

Exception: Slab-on-ground and other foundation systems which have performed adequately in soil conditions similar to those encountered at the building site are permitted subject to the approval of the building official.

1192 Section 48. That The Code of the City of Topeka, Kansas, is hereby amended
1193 by adding a section, to be numbered 14.55.510, which said section reads as follows:

1194 **Concrete encased electrode.**

1195 Section R403.1.9 Concrete encased electrode is hereby created by the addition
1196 of the following provisions:

1197 A concrete encased electrode shall be provided in the footings of all new
1198 buildings, structures and additions. Applicability and installation specifications and
1199 requirements shall be governed by the currently adopted edition of the National
1200 Electrical Code.

1201 Section 49. That The Code of the City of Topeka, Kansas, is hereby amended
1202 by adding a section, to be numbered 14.55.520, which said section reads as follows:

1203 **Shallow foundations.**

1204 Section R403.3 Frost protected shallow foundations is hereby deleted in its
1205 entirety and the following provisions shall be substituted therefor:

1206 Designs for shallow foundations that are not 36 inches below adjacent grade
1207 shall be designed and sealed by a registered design professional. The design for each
1208 shallow foundation shall be site specific and shall provide an alternate method of frost
1209 protection for the foundation and structure. Designs shall be made based on specific
1210 site conditions consisting of, but not limited to, soil type or classification, soil moisture
1211 content and water table and final site grading. The design must also address termite
1212 protection for the structure and methods to protect any insulating materials from future
1213 deterioration or displacement.

Exception: Floating footing/foundations for unheated detached residential garages and storage sheds when limited to 576 square feet (24 feet by 24 feet) in area and constructed per City of Topeka design specifications.

Section 50. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.530, which said section reads as follows:

Foundation and retaining walls.

Section R404 FOUNDATION AND RETAINING WALLS is hereby deleted in its entirety and the following provisions shall be substituted therefor:

FOUNDATION WALLS

R404.1 Concrete foundation walls. Concrete foundation walls that support light-frame walls shall be designed and constructed in accordance with the provisions of this section.

R404.1.1 Walls eight feet in height. Foundation walls eight feet (8') or less in height shall be constructed using the following criteria:

1. **Minimum width:** Eight inches (8") supporting two (2) floors or less and ten inches (10") supporting three (3) floors.

2. **Vertical reinforcing:** Number four (#4) bars at twenty-four inches (24 in.) on center placed on the inner third (3rd) of the wall but not closer than one and one half inches (1-1/2") to the edge.

3. **Horizontal reinforcing:** Number four (#4) bars placed in the following manner:

First (1st) bar, three feet (3') above footing.

Second (2nd) bar, five feet (5') above footing.

Third (3rd) and fourth (4th) bars in the upper twelve inches (12") of the wall at least two inches (2") apart with three inches (3") of coverage.

R404.1.2 Walls nine feet in height. Foundation walls nine feet (9') in height shall be constructed per City of Topeka design specifications for nine foot walls. Two approved designs are on file at this time. Approved engineered sealed designs are also allowed.

R404.1.3 Walls exceeding nine feet in height. Engineered sealed designs are required for all foundation walls exceeding nine feet (9') in height.

R404.2 General requirements. The following requirements shall be met for all foundation walls:

1. Reinforcing bars to be bent continuous around corners.
 2. Lapping of bars shall be a minimum of forty (40) bar diameters and wire tied.
 3. Horizontal bars shall be wired in place prior to pouring of concrete.
 4. Where unstable soil conditions exist an engineer shall design the footing and foundation based upon a soil report.
 5. Concrete and masonry foundation walls shall extend above the finish grade adjacent to the foundation at all points a minimum of four inches (4") where masonry veneer is used and a minimum of eight inches (8") elsewhere.
- R404.3 Wood sill plates.** Wood sill plates shall be a minimum of 2-inch by 4-inch (51 mm by 102 mm) nominal lumber. Sill plate anchorage shall be in accordance with Sections R403.1.6 and R602.11.

Section 51. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.540, which said section reads as follows:

Decks.

Except for Sections R502.2.2.1, Section R502.2.2 Decks is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads as applicable. A structural ledger is required and shall be attached to the structure per R502.2.2.1 with verification by inspection. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self-supporting. For decks with cantilevered framing members, connections to exterior walls or other framing members, shall be designed and constructed to resist uplift resulting from the full live load specified in Table R301.5 acting on the cantilevered portion of the deck.

Section 52. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.550, which said section reads as follows:

Lateral restraint at supports.

Except for Sections R502.7.1, Section R502.7 Lateral restraint at supports is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Joists shall be supported laterally at the ends by full-depth solid blocking not less than 2 inches (51 mm) nominal in thickness; or by attachment to a full-depth header,

band or rim joist, or to an adjoining stud or shall be otherwise provided with lateral support to prevent rotation.

Exceptions:

1. Trusses, structural composite lumber, structural glued-laminated members and I-joists shall be supported laterally as required by the manufacturer's recommendations.

2. In Seismic Design Categories D₀, D₁ and D₂, lateral restraint shall also be provided at each intermediate support.

3. Solid blocking may be omitted over interior supports when supporting only one floor level and the roof.

Section 53. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.560, which said section reads as follows:

Truss design drawings.

Section R502.11.4 Truss design drawings is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Truss design drawings shall be prepared in compliance with Section R502.11.1. The building official may require truss design drawings to be submitted and approved prior to installation. Truss design drawings shall be provided with the shipment of trusses delivered to the job site and shall be made available to the building official at the job site for reference during inspections. Truss design drawings shall include, at a minimum, the information specified below:

1. Slope or depth, span and spacing.

2. Location of all joints.

- 1304 3. Required bearing widths.
- 1305 4. Design loads as applicable:
- 1306 4.1. Top chord live load.
- 1307 4.2. Top chord dead load.
- 1308 4.3. Bottom chord live load.
- 1309 4.4. Bottom chord dead load.
- 1310 4.5. Concentrated loads and their points of application.
- 1311 4.6. Controlling wind and earthquake loads.
- 1312 5. Adjustments to lumber and joint connector design values for conditions of
- 1313 use.
- 1314 6. Each reaction force and direction.
- 1315 7. Joint connector type and description, e.g., size, thickness or gauge, and
- 1316 the dimensioned location of each joint connector except where symmetrically
- 1317 located relative to the joint interface.
- 1318 8. Lumber size, species and grade for each member.
- 1319 9. Connection requirements for:
- 1320 9.1. Truss-to-girder-truss;
- 1321 9.2. Truss ply-to-ply; and
- 1322 9.3. Field splices.
- 1323 10. Calculated deflection ratio and/or maximum description for live and total
- 1324 load.
- 1325 11. Maximum axial compression forces in the truss members to enable the
- 1326 building designer to design the size, connections and anchorage of the

permanent continuous lateral bracing. Forces shall be shown on the truss drawing or on supplemental documents.

12. Required permanent truss member bracing location.

Section 54. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.570, which said section reads as follows:

Vapor retarder.

Section R506.2.3 Vapor retarder is hereby deleted in its entirety and the following provisions shall be substituted therefor:

A vapor retarder is not mandatory, but when provided under concrete floor slabs, a 6 mil (0.006 inch; 152 mm) polyethylene or approved vapor retarder with joints lapped not less than 6 inches (152 mm) shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists.

Section 55. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.580, which said section reads as follows:

Braced wall panel connections.

Except for Sections R602.10.6.1 and R602.10.6.2, Section R602.10.6 Braced wall panel connections is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Braced wall panels shall be connected to floor framing or foundations as follows:

1. Where joists are perpendicular to a braced wall panel above or below, a rim joist, band joist or blocking shall be provided along the entire length of the braced wall panel in accordance with Figure R602.10.6(1). Fastening of top and bottom wall

plates to framing, rim joist, band joist and/or blocking shall be in accordance with Table R602.3(1).

2. Where joists are parallel to a braced wall panel above or below, a rim joist, end joist or other parallel framing member shall be provided directly above and below the braced wall panel in accordance with Figure R602.10.6(2). Where a parallel framing member cannot be located directly above and below the panel, full-depth blocking at 16 inch (406 mm) spacing shall be provided between the parallel framing members to each side of the braced wall panel in accordance with Figure R602.10.6(2). Fastening of blocking and wall plates shall be in accordance with Table R602.3(1) and Figure R602.10.6(2).

3. Connections of braced wall panels to concrete or masonry shall be in accordance with Section R403.1.6.

4. Wood sole plates of braced wall panels located at building interiors on monolithic slabs may be anchored using connectors with a minimum shear capacity of 2300 lbs and minimum tensile capacity of 800 lbs over a maximum spacing of 6 feet.

Section 56. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.590, which said section reads as follows:

Attic access.

Section R807.1 Attic access is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 square feet (2.8 m²) and have a vertical height of

30 inches (762 mm) or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall not be less than 22 inches by 24 inches (559 mm by 610 mm) and shall be located in a readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high. When the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

Section 57. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.600, which said section reads as follows:

Overflow drains and scuppers.

Section R903.4.1 Overflow drains and scuppers is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Where roof drains are required, overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches (51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with the currently adopted edition of the Uniform Plumbing Code.

Overflow drains shall discharge to an approved location and shall not be connected to roof drain lines.

1394 Section 58. That The Code of the City of Topeka, Kansas, is hereby amended
1395 by adding a section, to be numbered 14.55.610, which said section reads as follows:

1396 **Drip edge.**

1397 Section R905.2.8.5 Drip edge is hereby created by the addition of the following
1398 provisions:

1399 Shingle roofs shall be provided with drip edge flashing at eaves and rakes. Eave
1400 and rake drip edges shall extend 3/8 inch minimum outside the fascia or a distance
1401 specified by the shingle manufacturer's installation instructions, whichever is greater.
1402 Drip edge flashing at eaves shall extend back on the roof a minimum of 2 inches and
1403 shall be installed under the underlayment. Drip edge flashing at rakes shall extend back
1404 on the roof a minimum of 1 ½ inches and shall be installed over the underlayment. Drip
1405 edge flashing shall be mechanically fastened a maximum of 12 inches o.c.

1406 Section 59. That The Code of the City of Topeka, Kansas, is hereby amended
1407 by adding a section, to be numbered 14.55.620, which said section reads as follows:

1408 **Gas appliances.**

1409 Section R1003.11.3 Gas appliances is hereby deleted in its entirety and the
1410 following provisions shall be substituted therefor:

1411 Flue lining systems for gas appliances shall be in accordance with the currently
1412 adopted edition of the Uniform Mechanical Code.

1413 Section 60. That The Code of the City of Topeka, Kansas, is hereby amended
1414 by adding a section, to be numbered 14.55.630, which said section reads as follows:

1415 **Flue area (appliance).**

Section R1003.14 Flue area (appliance) is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Chimney flues shall not be smaller in area than that of the area of the connector from the appliance [see Tables R1003.14(1) and R1003.14(2)]. The sizing of a chimney flue to which multiple appliance venting systems are connected shall be in accordance with the currently adopted edition of the Uniform Mechanical Code.

Section 61. That The Code of the City of Topeka, Kansas, is hereby amended by adding a section, to be numbered 14.55.640, which said section reads as follows:

Appendix F.

Appendix F, Radon Control Methods, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

NEW CONSTRUCTION RADON CONTROL METHODS FOR THE CITY OF TOPEKA

SECTION AF101. SCOPE

AF101.1 General. This appendix contains requirements for new construction in jurisdictions where radon-resistant construction is required.

Inclusion of this appendix by jurisdictions shall be determined through the use of locally available data or determination of Zone 1 designation in Figure AF101.

SECTION AF102. DEFINITIONS

AF102.1 General. For the purpose of these requirements, the terms used shall be defined as follows:

SUB-SLAB DEPRESSURIZATION SYSTEM (Passive). A system designated to achieve lower sub-slab air pressure relative to indoor air pressure by use of a vent pipe routed through the conditioned space of a building and connecting the sub-slab area with

outdoor air, thereby relying on the convective flow of air upward in the vent to draw air from beneath the slab.

SUB-SLAB DEPRESSURIZATION SYSTEM (Active). A system designed to achieve lower sub-slab air pressure relative to indoor air pressure by use of a fan-powered vent drawing air from beneath the slab.

DRAIN TILE LOOP. A continuous length of drain tile or perforated pipe extending around all or part of the internal or external perimeter of a basement or crawl space footing.

RADON GAS. A naturally occurring, chemically inert, radioactive gas that is not detectable by human senses. As a gas, it can move readily through particles of soil and rock and can accumulate under the slabs and foundations of homes where it can easily enter into living space through construction cracks and openings.

SOIL-GAS-RETARDER. A continuous membrane of 6-mil (0.15 mm) polyethylene or other equivalent material used to retard the flow of soil gases into a building.

SUB-MEMBRANE DEPRESSURIZATION SYSTEM. A system designed to achieve lower-sub-membrane air pressure relative to crawl space air pressure by use of a vent drawing air from beneath the soil-gas-retarder membrane.

SECTION AF103. REQUIREMENTS

AF103.1 General. The following construction techniques are intended to resist radon entry and prepare the building for post-construction radon mitigation, if necessary (see Figure AF102). These techniques are required in areas where designated by the jurisdiction.

AF103.2 Subfloor preparation. A layer of gas-permeable material shall be placed under all concrete slabs and other floor systems that directly contact the ground and are within the walls of the living spaces of the building, to facilitate future installation of a sub-slab depressurization system, if needed. The gas-permeable layer shall consist of one of the following:

1. A uniform layer of clean aggregate, a minimum of 4 inches (102 mm) thick. The aggregate shall consist of material that will pass through a 2-inch (51 mm) sieve and be retained by a 1/4-inch (6.4 mm) sieve.

2. A uniform layer of sand (native or fill), a minimum of 4 inches (102 mm) thick, overlain by a layer or strips of geotextile drainage matting designed to allow the lateral flow of soil gases.

3. A uniform layer of sand or native fill a minimum of 4 inches (102 mm) thick, with a minimum 2 inch (51 mm) diameter interior perimeter drain tile loop laid approximately 12 inches inside the internal perimeter of the foundation footing.

4. Other materials, systems or floor designs with demonstrated capability to permit depressurization across the entire sub-floor area.

AF103.3 Soil-gas-retarder. It is recommended, but not required, that a minimum 6-mil (0.15 mm) [or 3-mil (0.075 mm) cross-laminated] polyethylene or equivalent flexible sheeting material shall be placed on top of the gas-permeable layer prior to casting the slab or placing the floor assembly to serve as a soil-gas-retarder by bridging any cracks that develop in the slab or floor assembly and to prevent concrete from entering the void spaces in the aggregate base material. If utilized, the sheeting shall cover the entire floor area with separate sections of sheeting lapped at least 12 inches (305 mm). The

sheeting shall fit closely around the pipe, wire or other penetrations of the material. All punctures or tears in the material shall be sealed or covered with additional sheeting.

AF103.4 ENTRY ROUTES. It is recommended, but not required, that potential radon entry routes be closed in accordance with Sections AF103.4.1 through AF103.4.10. Notwithstanding the foregoing, the covering of sump pits as described in Section AF103.4.4 is required.

AF103.4.1 Floor openings. Openings around bathtubs, showers, water closets, pipes, wires or other objects that penetrate basement or slab on grade concrete slabs shall be filled with polyurethane caulk or equivalent sealant applied in accordance with the manufacturer's recommendations.

AF103.4.2 Concrete joints. All control joints, isolation joints, construction joints and any other joints in concrete slabs or between slabs or foundation walls shall be sealed with a caulk or sealant. Gaps and joints shall be cleared of loose material and filled with polyurethane caulk or other elastomeric sealant applied in accordance with the manufacturer's recommendations.

AF103.4.3 Condensate drains. Condensate drains shall be trapped or routed through nonperforated pipe to daylight.

AF103.4.4 Sumps. Sump pits open to soil or serving as the termination point for sub-slab or exterior drain tile loops shall be covered with a gasketed or otherwise sealed lid. Sumps used as the suction point in a sub-slab depressurization system shall have a lid designed to accommodate the vent pipe. Sumps used as a floor drain shall have a lid equipped with a trapped inlet.

1506 AF103.4.5 Foundation walls. Hollow block masonry foundation walls shall be
1507 constructed with either a continuous course of solid masonry, one course of masonry
1508 grouted solid, or a solid concrete beam at or above finished ground surface to prevent
1509 passage of air from the interior of the wall into the living space. Where a brick veneer or
1510 other masonry ledge is installed, the course immediately below that ledge shall be
1511 sealed. Joints, cracks or other openings around all penetrations of both exterior and
1512 interior surfaces of masonry block or wood foundation walls below the ground surface
1513 shall be filled with polyurethane caulk or equivalent sealant. Penetrations of concrete
1514 walls shall be filled.

1515 AF103.4.6 Dampproofing. The exterior surfaces of portions of concrete and masonry
1516 block walls below the ground surface shall be dampproofed in accordance with Section
1517 R406 of this code.

1518 AF103.4.7 Air-handling units. Air-handling units in crawl spaces shall be sealed to
1519 prevent air from being drawn into the unit.

1520 Exception: Units with gasketed seams or units that are otherwise sealed by the
1521 manufacturer to prevent leakage.

1522 AF103.4.8 Ducts. Ductwork passing through a crawl space or beneath a slab shall be of
1523 seamless material unless the air-handling system is designed to maintain continuous
1524 positive pressure within such ducting. Joints in such ductwork shall be sealed to prevent
1525 air leakage.

1526 AF103.4.9 Crawl space floors. Openings around all penetrations through floors above
1527 crawl spaces shall be caulked or otherwise filled to prevent air leakage.

AF103.4.10 Crawl space access. Access doors and other openings or penetrations between basements and adjoining crawl spaces shall be closed, gasketed or otherwise filled to prevent air leakage.

AF103.5 Passive sub-membrane depressurization system. In buildings with crawl space foundations, the following components of a passive sub-membrane depressurization system shall be installed during construction.

Exception: Buildings in which an approved mechanical crawl space ventilation system or other equivalent system is installed.

AF103.5.1 Ventilation. Crawl spaces shall be provided with vents to the exterior of the building. The minimum net area of ventilation openings shall comply with Section R408.1 of this code.

AF103.5.2 Soil-gas-retarder. The soil in crawl spaces shall be covered with a continuous layer of minimum 6-mil (0.15 mm) polyethylene soil-gas-retarder. The ground cover shall be lapped a minimum of 12 inches (305 mm) at joints and shall extend to all foundation walls enclosing the crawl space area. It is recommended that acoustical sealant, butyl rubber, or butyl acrylic caulks be used to provide adhesion to the polyethylene sheeting. Polyurethane caulk will also provide some adhesion to the polyethylene sheeting. Seams between adjoining sheets of sheeting are usually sealed by applying a continuous bead of sealant between the sheeting in the 12-inch strip where the sheets overlap. Plastic should be secured to the wall at 6 to 12 inches above the crawlspace floor with a 1/2 inch wide bead of acoustical sealant or butyl caulk along the wall. For a more durable connection mechanical fasteners, such as strapping, should be considered, to hold the plastic to the wall.

AF103.5.3 Vent pipe. A plumbing tee (2 inch minimum diameter) or other approved connection shall be inserted horizontally beneath the sheeting and connected to a 3- or 4-inch diameter (76 mm or 102 mm) fitting with a vertical vent pipe installed through the sheeting. The vent pipe shall be extended up through the building floors, terminate at least 12 inches (305 mm) above the roof in a location at least 10 feet (3048 mm) away from any window or other opening into the conditioned spaces of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) away from any window or other opening into the conditioned spaces of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) from any window or other adjoining or adjacent buildings.

AF103.6 Passive sub-slab depressurization system. In basement or slab-on-grade buildings, the following components of a passive sub-slab depressurization system shall be installed during construction.

AF103.6.1 Vent pipe. A minimum 3-inch-diameter (76 mm), ABS, PVC or equivalent gas-tight pipe shall be embedded vertically into a "T" fitting (2 inch minimum diameter) or equivalent method to be used to ensure that the pipe opening remains within the sub-slab permeable material. Alternatively, the 3-inch (76 mm) pipe shall be inserted directly into an interior perimeter drain tile loop or through a sealed sump cover where the sump is exposed to the sub-slab aggregate or connected to it through a drainage system.

The pipe shall be extended up through the building floors, terminate at least 12 inches (305 mm) above the surface of the roof in a location at least 10 feet (3048 mm) away from any window or other opening into the conditioned spaces of the building that is less

1573 than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) from any window
1574 or other opening in adjoining or adjacent buildings.

1575 AF103.6.2 Multiple vent pipes. In buildings where interior footings or other barriers
1576 separate the sub-slab aggregate or other gas-permeable material, each area shall be
1577 fitted with an individual vent pipe. Vent pipes shall connect to a single vent that
1578 terminates above the roof or each individual vent pipe shall terminate separately above
1579 the roof.

1580 AF103.7 Vent pipe drainage. All components of the radon vent pipe system shall be
1581 installed to provide positive drainage to the ground beneath the slab or soil-gas-
1582 retarder.

1583 AF103.8 Vent pipe accessibility. Radon vent pipes shall be accessible for future fan
1584 installation through an attic or other area outside the habitable space.

1585 Exception: The radon vent pipe need not be accessible in an attic space where an
1586 approved roof-top electrical supply is provided for future use.

1587 AF103.9 Vent pipe identification. All exposed and visible interior radon vent pipes shall
1588 be identified with at least one label on each floor and in accessible attics. The label shall
1589 read: "Radon Reduction System."

1590 AF103.10 Combination foundations. Combination basement/crawl space or slab-on-
1591 grade/crawl space foundations shall have separate radon vent pipes installed in each
1592 type of roof or shall be connected to a single vent that terminates above the roof.

1593 AF103.11 Building depressurization. Joints in air ducts and plenums in unconditioned
1594 spaces shall meet the requirements of Section M1601. Thermal envelope air infiltration

requirements shall comply with the energy conservation provisions in Chapter 11.

Firestopping shall meet the requirements contained in Section R602.8.

AF103.12 Power source. To provide for future installation of an active sub-membrane or sub-slab depressurization system, an electrical circuit terminated in an approved box shall be installed during construction in the attic or other anticipated locations of vent pipe fans.

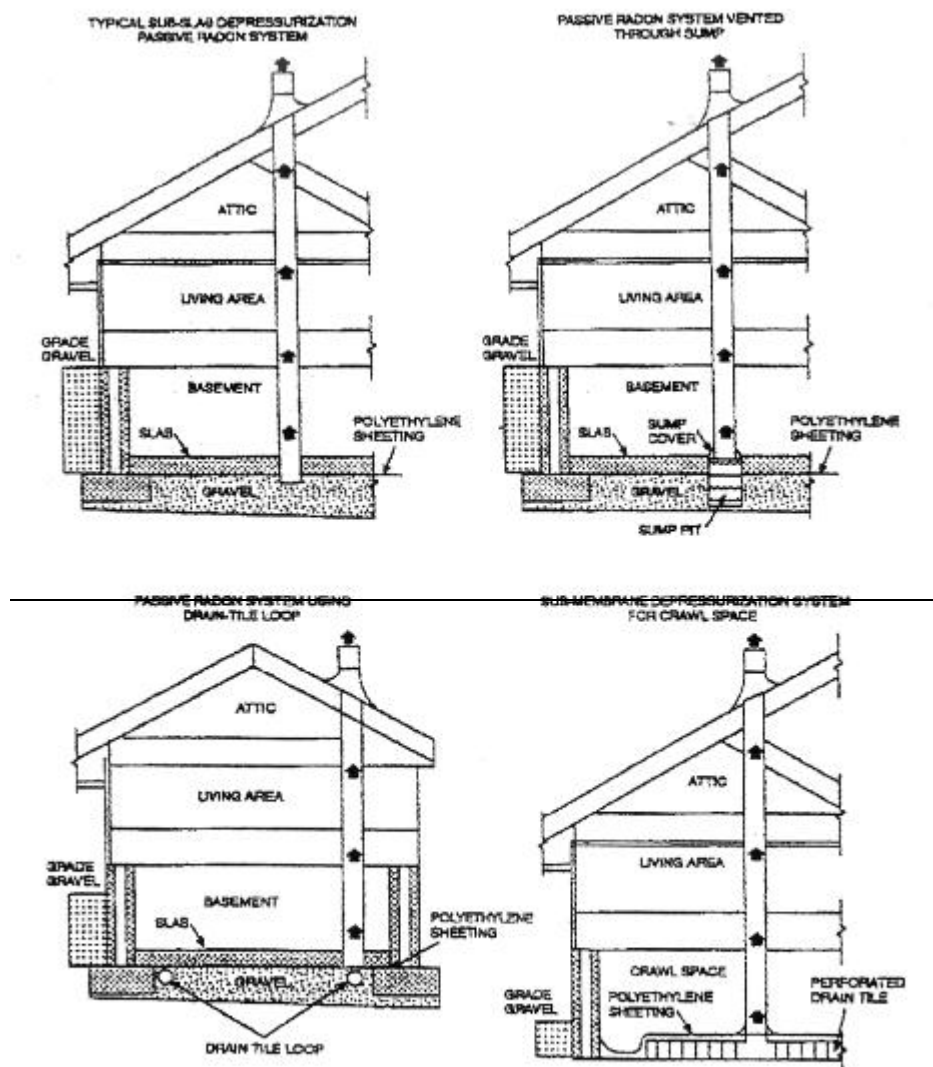


FIGURE AF102
RADON-RESISTANT CONSTRUCTION DETAILS FOR FOUR FOUNDATION TYPES

1602 Section 62. That original § 14.55.010 and § 14.55.060 through § 14.55.270 of
1603 The Code of the City of Topeka, Kansas, is hereby specifically repealed.

1604 Section 63. This ordinance shall take effect and be in force on July 1, 2012, and
1605 after its passage, approval and publication in the official City newspaper.

1606 Section 64. This ordinance shall supersede all ordinances, resolutions or rules,
1607 or portions thereof, which are in conflict with the provisions of this ordinance.

1608 Section 65. Should any section, clause or phrase of this ordinance be declared
1609 invalid by a court of competent jurisdiction, the same shall not affect the validity of this
1610 ordinance as a whole, or any part thereof, other than the part so declared to be invalid.

1611 PASSED AND APPROVED by the Governing Body on April 24, 2012.

1612
1613 CITY OF TOPEKA, KANSAS

1614
1615 _____
1616 William W. Buntten, Mayor

1617 ATTEST:

1618
1619 _____
1620 Brenda Younger, City Clerk